

Attorney Docket No.: 5218-88
Application No.: 10/068,016
Filed: February 5, 2002
Page 19 of 25

REMARKS

This Response is submitted in reply to the Office Action mailed October 4, 2004 ("the Action"). Claims 1-67 are pending in the application. Claims 11, 36, 46 and 50-57 are withdrawn from consideration as being directed to non-elected subject matter.

I. Allowed and Allowable Claims

Applicants acknowledge, with appreciation, the Examiner's allowance of Claims 31-45. The Examiner also states that Claims 2, 3, 6 and 10 recite patentable subject matter and would be allowed if amended into independent form. Accordingly, Applicants have amended Claims 2, 3, 6 and 10 to place them in condition for allowance, which action is respectfully requested. Applicants have also amended Claim 38 (which depended from Claim 1) to place this claim in independent form. As such, Claims 38-45 are now in independent form and allowed.

II. The Art Rejections

Claims 1, 4, 5, 7-9, 12-14, 18-20, 26-30, 47 and 58 stand rejected as anticipated by or obvious over U.S. Patent No. 6,379,314 to Horn ("Horn") alone or combined with secondary references including U.S. Patent No. 3,808,354 to Feezor ("Feezor") and/or U.S. Patent No. 6,283,761 to Joao ("Joao"). Claims 60-67 stand rejected as obvious over U.S. Patent No. 6,322,521 to Hou ("Hou") in view of U.S. Patent No. 5,687,717 to Halperin ("Halperin"). Applicants respectfully disagree.

A. The §102(e) Rejection of Claim 47

Horn describes allowing a "community of users to self-administer" a hearing test via a computer system accessed over the Internet. Horn fails to teach or suggest, *inter alia*, a remotely controlled test as the test proposed by Horn is "self-administered." In contrast, Claim 47 recites in-part:

wherein the hearing evaluation device is configured to receive commands from a remote site through said processor over the computer network during the hearing

Attorney Docket No.: 5218-88
Application No.: 10/068,016
Filed: February 5, 2002
Page 20 of 25

evaluation to allow the remote site to select and/or adjust the tones generated by the tone generator. (emphasis added)

In view of the foregoing, Applicants respectfully submit that Claim 47 is patentable over the cited reference.

B. The §103 Rejections citing Feezor in view of Horn

Feezor states that "[m]eans are provided for the rapid and accurate accumulation and computation of the hearing test results at a separate remotely located data processing center for subsequent analysis" (Feezor, col. 40, lines 35-40, emphasis added). Notably, Feezor also states that a supervisor at the test site can control the local testing and can "invalidate an individual hearing test...in the event of malfunction, unexpected noise, etc..." (Feezor, col. 37, lines 19-22 and Figure 29). Feezor fails to disclose a remotely controlled test or an interactive evaluation during the test between the remote and local sites, much less a test that is sufficiently accurate and reliable to be able to comply with testing standards. Horn fails to resolve the deficiencies of Feezor, because Horn proposes a "self-administered" test and fails to teach or suggest a remotely controlled test.

Claim 1 recites in-part:

interactively relaying information between the patient located at the local site and a clinician located at the test administration site during said administering step so that the clinician can evaluate the patient's response to the hearing assessment signals, the test administration site being remote from the local site; and controlling the output of the hearing assessment signals during the administering step such that the clinician at the test administration site determines which hearing assessment signals of the generating step are relayed locally to the patient.

Claims 4, 5, 7-9, 12-14, 18-20, 26-30, 58 and 59 depend from Claim 1 and are patentable over the cited references for depending from a patentable independent claim. However, Applicants also submit that certain of the dependent claims are independently patentable over the cited references. These include, for example, Claims 5 (reciting that the test meets predetermined test standards), 7 (reciting relaying dynamic audiovisual

Attorney Docket No.: 5218-88

Application No.: 10/068,016

Filed: February 5, 2002

Page 21 of 25

communications of the patient during the test), 9 (reciting controlling the sound intensity of the hearing assessment signals delivered to the patient from said test administration site), 28 (reciting controlling the tone presentation of the hearing assessment signals such that the harmonic distortion is less than about 1%), 29 (reciting that the hearing evaluation conforms to standardized ANSI requirements), 58 and 59 (reciting web server features and/or substantially real-time hearing evaluation test by a clinician at the remote site).

In view of the foregoing, Applicants respectfully submit that the claims identified above are patentable over the cited references.

C. The §103 Rejections citing Feezor and Horn and Joao

Claims 21-25 stand rejected in view of Feezor, Horn and Joao. The Action concedes that Feezor and Horn fail to disclose scheduling an appointment time suitable for obtaining health provider information and the like. However, the Action cites Joao for teaching these features and concludes that it would have been obvious to modify the combination of Feezor and Horn "since it would provide a means of allowing the patient to schedule the hearing test at an appropriate time." Applicants respectfully disagree.

Neither Feezor or Horn propose a remotely controlled test whereby a clinician interacts with the patient during the test. As such, there is no motivation to "modify" or combine the references to provide a scheduling means absent the teachings of the present invention. As such, Applicants respectfully submit that these claims are independently patentable over the cited references.

D. The §103 Rejections citing Hou in view of Halperin

Claims 60-67 stand rejected as obvious over Hou in view of Halperin. Hou and Halperin propose remote testing of hearing. The Action concedes that Hou and Halperin fail to teach or suggest that the testing complies with predetermined standardized testing codes. However, the Examiner states that Feezor teaches a system for testing that complies with standardized testing codes and, hence, it would have been "obvious to one of ordinary skill" at the time the invention was made to "modify the combination of Hou and Halperin" to

Attorney Docket No.: 5218-88
Application No.: 10/068,016
Filed: February 5, 2002
Page 22 of 25

include the use of predetermined standardized testing codes per Feezor to accurately test hearing. Applicants respectfully disagree.

Indeed, Hou states that its "on-line hearing loss testing can be self-performed without any specialized equipment" (col.3, lines 12-15, col. 32-35). As such, Hou actually teaches away from the claimed invention, as the Hou methodology is "self-performed" without specialized equipment or remote interaction during the test.

Halperin proposes a patient monitoring system that includes at least one chassis, a plurality of patient care modules associated with the chassis, and a portable computer for communicating with, and controlling the modules. Each patient is assigned to a chassis, and each module is assigned to a patient and to a chassis. As described, each module is fully operational in either an independent or a dependent mode. In both modes, the chassis continuously polls the module for patient data collected by the module. In the dependent mode, the module is physically received by, and powered from, the chassis, and sends patient data to a computer in the chassis for storage therein. Halperin does state that the module 16 can be an "accessory module" to perform "hearing tests" and lists other functions such as, vision and eye tests and even pumping breast milk. No further detail of a hearing test is provided. One of skill in the art would not have combined the references in a manner that would render the claimed invention obvious. Further, even combined the references fail to provide an enabling teaching of a system that can use a global computer system to allow a clinician or remote test site to control the test remotely.

Claim 60 recites:

A system configured to perform a hearing evaluation test over a computer network, comprising:

a portable local communication device comprising an interface having a web server and controller configured to communicate over a computer network with a remote clinician test administration site in substantially real-time during a diagnostic hearing evaluation test; and

a local audiometer in communication with the controller and configured to selectively output a plurality of hearing assessment signals controlled by the remote test site via the web server during the hearing test and receive patient responses thereto. (emphasis added)

Attorney Docket No.: 5218-88
Application No.: 10/068,016
Filed: February 5, 2002
Page 23 of 25

Further, in some embodiments the system is configured to allow a clinician at the remote site to perform the diagnostic hearing evaluation in substantially real-time (Claim 65) or other features recited in dependent claims 61-66.

In view of the foregoing, Applicants respectfully submit that Claims 60-66 are patentable over the cited references.

E. The §103 Rejections citing Hou in view of Halperin

Claims 48 and 49 stand rejected over Horn in view of Feezor. Claims 48 and 49 depend from Claim 47, which Applicants submit is patentable over the cited references as discussed above. Claims 48 and 49 also recite independently patentable subject matter. Horn fails to teach or suggest a remotely controlled test as the test proposed by Horn is "self-administered." As noted above, Feezor states that "[m]eans are provided for the rapid and accurate accumulation and computation of the hearing test results at a separate remotely located data processing center for subsequent analysis" (Feezor, col. 40, lines 35-40, emphasis added). Notably, Feezor also states that a supervisor at the test site can control the local testing and can "invalidate an individual hearing test...in the event of malfunction, unexpected noise, etc..." (Feezor, col. 37, lines 19-22 and Figure 29). Feezor fails to disclose a portable device that allows a remotely controlled test or an interactive evaluation during the test between the remote and local sites, much less a device that provides a test that is sufficiently accurate and reliable to be able comply with testing standards.

Claim 48 states that the portable device includes a microphone configured to detect ambient noise and an audio analyzer in electrical communication with the microphone for measuring the sound level detected by the microphone.

Claim 49 states that the device is portable and configured to operate independently of a local computer and allow substantially real-time interactive communication between the local and remote sites during the hearing evaluation.

Applicants respectfully submit that Claims 48 and 49 are patentable over the cited references.

Attorney Docket No.: 5218-88
Application No.: 10/068,016
Filed: February 5, 2002
Page 24 of 25

F. The §103 Rejections citing Hou in view of Halperin and Feezor

The Action rejects Claim 67 over Hou in view of Halperin and Feezor. The Action concedes that Hou and Halperin fail to teach or suggest that the system can carry out hearing tests that comply with predetermined standardized testing codes. However, the Action states that Feezor discloses "testing hearing over a network" that complies with testing codes (citing col. 11, lines 30-31 of Feezor). Applicants respectfully disagree.

Feezor performs the test locally, then transfers the patient data for subsequent processing (Feezor, col. 40, lines 35-40). Referring to the cited passage in Feezor, this reference only states that the local testing can use earphones that are "suitably calibrated to ANSI standards." Clearly, Feezor fails to teach or suggest performing a hearing test using a computer network that complies with ANSI standards. Even combined, the cited references fail to teach or suggest (or provide any enabling methodology) that would render the claimed invention obvious.

As noted in Applicant's prior response, there may have been a desire for an accurate test, but until the instant invention, there was no enabling disclosure on how one might operate a remote, interactive, Internet-based test in a way that could reliably control audio signals sufficient to comply with predetermined standards (*i.e.*, CPT and/or ANSI requirements), particularly where remote control of the test is employed and signal distortion transmitted over the communications media can undesirably vary. Indeed, in some embodiments, the present invention can provide a system that can economically perform several different (insurance) coded hearing tests (potentially 10-12 different test codes) that may allow increased access to persons that, in the past, may not have had access to the variety of tests made available by embodiments of the present invention.

Applicants respectfully submit that Claim 67 is patentable over the cited references.

III. New Claims

Applicants have added new dependent claims that generally correspond to original Claims 2, 3, 4, 5 and 10 to form a more complete claim set for the application. Applicants


Attorney Docket No.: 5218-88
Application No.: 10/068,016
Filed: February 5, 2002
Page 25 of 25

have also added claims or included in the new claims that the test is carried out to allow a clinician at the remote site to perform a diagnostic evaluation in substantially real-time.

IV. Conclusion

Applicants submit that the present application is in condition for allowance and the same is earnestly solicited. Should the Examiner have any matters outstanding of resolution, he is encouraged to telephone the undersigned at 919-854-1400 for expeditious handling.

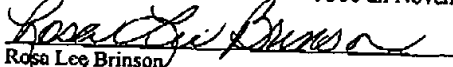
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CERTIFICATION OF FACSIMILE TRANSMISSION UNDER 37 CFR 1.8

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